UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,261	11/03/2003	Jui-Feng Ko	JCLA7806	6081

23900 7590 08/08/2006	EXAMINER
J C PATENTS, INC. 4 VENTURE, SUITE 250 IRVINE, CA 92618	SHERMAN, STEPHEN G

ART UNIT	PAPER NUMBER
2629	

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/701,261	KO ET AL.
	Examiner	**Art Unit**	
	Stephen G. Sherman	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 July 2006*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to the amendment filed the 17 July 2006. Claims

1-7 are pending.

Response to Arguments

2.   Applicant's arguments filed the 17 July 2006 have been fully considered but they

are not persuasive.

On page 6, under the heading "Discussion of Rejections Under 35 USC 102(e)"

the applicant argues the rejection of claim 7 based on Figure 7 of Sha (US 6,980,581).

The applicant states that the range of 10 modulation cycles in Sha is not equivalent to a

"spread out width" in the above patentable claim limitation because the inherent shape

of the data obtain via the loop from s208 to s216 in Figure 7 is different from that of an

embodiment of the present invention, and that Sha teaches of a different algorithm that

control the gain of a VCO and adjust the gain function and thus does not teach nor

require the reduction of peak values based upon the "spreading out width" method as

claimed in the above claim limitation. The examiner respectfully disagrees.

The claimed limitation states: "determining a specified frequency of the

electromagnetic interference signal and a corresponding spread out width at that

frequency **according to an algorithm**; and spreading out the electromagnetic

interference signal according to the spread out width using the specified frequency as

the center of spreading." The claim does not say that the algorithm is what is

determined the spread out width but only that it is determined "according to an

algorithm." As the examiner stated in the rejection, Figure 5 of Sha shows that the

feedback divider 116 receives Vout, where Vout is created according to an algorithm,

from the AGO VCO 108 which them produces the signal FEEDBACK which is input into

the spread spectrum circuitry 118 for determining the spread out width at the specified

frequency, as explained in column 4, lines 13-26, which also states that the ROM codes

are optimized for the frequency Fout such that the spread spectrum circuitry can

properly spread out the width using the frequency Fout as the center frequency.

Therefore the spread out width is determined "according to an algorithm." If it is the

applicant's intention that the algorithm is what is determining the spread out width, then

it should be clearly stated in the claim that this is what is occurring.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Sha

et al. (US 6,980,581).

        Regarding claim 1, Sha et al. disclose a control chip built inside an integrated

circuit for reducing electromagnetic interference (Figures 4 and 5), wherein

        the control chip is able to spread out the frequency of an electromagnetic

interference signal according to an algorithm (Figure 5, shows that the feedback divider

116 receives Vout from the AGO VCO 108, where Vout is created according to an

algorithm, which them produces the signal FEEDBACK which is input into the spread

spectrum circuitry 118 for determining the spread out width at the specified frequency

as explained in column 4, lines 13-26.), and

        the electromagnetic interference signal at each frequency are modulated

according to a corresponding spread out width (Column 4, lines 13-26 explain that the

ROM codes are optimized for the frequency Fout such that the spread spectrum

circuitry can properly spread out the width using the frequency Fout as the center

frequency.).

        Regarding claim 7, Sha et al. disclose a method of reducing the strength of an

electromagnetic interference signal, comprising the steps of:

        receiving an algorithm (Figures 5 and 7 and column 4, lines 39-56 explain that

AGO VCO 108 receives a computer program, or algorithm as shown in Figure 7, and as

explained in column 5, lines 30-39 if the computer program is stored then the AGO VCO

108 would have to receive the algorithm from the storage.);

determining a specified frequency of the electromagnetic interference signal and

a corresponding spread out width at that frequency according to the algorithm (Figure 5,

shows that the feedback divider 116 receives Vout from the AGO VCO 108 which them

produces the signal FEEDBACK which is input into the spread spectrum circuitry 118

for determining the spread out width at the specified frequency as explained in column

4, lines 13-26.); and

spreading out the electromagnetic interference signal according to the spread out

width using the specified frequency as the center of spreading (Column 4, lines 13-26

explain that the ROM codes are optimized for the frequency Fout such that the spread

spectrum circuitry can properly spread out the width using the frequency Fout as the

center frequency.).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating
           obviousness or nonobviousness.

7.   Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sha

et al. (US 6,980,581) in view of Yavitz (US 2003/0033385).

    Regarding claim 2, Sha et al. disclose the control chip of claim 1.

    Sha et al. fail to teach that the control chip picks up the algorithm from an

external bus.

    Yavitz discloses of a control chip which picks up an algorithm from an external

bus (Figure 2 shows that the card 30 picks up application software 76 from an external

bus 43 to be applied to the PLL 64 as explained in paragraph [0027].).

    Therefore it would have been obvious to "one of ordinary skill" in the art at the

time the invention was made that the computer program used by the control chip taught

by Sha et al. would be received from an external bus as taught by Yavitz such that a

separate memory for the computer program would not be needed inside the control chip

in order to allow for the conservation of space for the control chip such that the control

chip can be made smaller.

Regarding claim 3, Sha et al. disclose a control chip for reducing

electromagnetic interference, comprising:

a software phase lock loop (Figure 5, item 100. The examiner interprets that

since the PLL shown uses an algorithm, as explained in the rejection of claim 1, that it is

a SPPL.) built inside the control chip for receiving a clock signal (Figure 5, the phase

detector 110 receives REF 102 as explained in column 4, lines 2-3. Column 3, lines 35-

46 explain that the output signal Fout is a spread spectrum clock signal with a mean

frequency determined by the frequency for the signal REF, and if the signal REF has a

frequency then it is a clock signal.) and spreading out the frequency of an

electromagnetic interference signal according to an algorithm (Please refer to the

explanation used in the rejection of claim 1.), wherein the electromagnetic interference

signal at each frequency are modulated according to a corresponding spread out width

(Column 4, lines 13-26 explain that the ROM codes are optimized for the frequency

Fout such that the spread spectrum circuitry can properly spread out the width using the

frequency Fout as the center frequency.).

Sha et al. fail to teach that the control chip comprises a bus coupled to the

software phase lock loop for inputting the algorithm.

Yavitz discloses of a control chip which picks up an algorithm from an external

bus (Figure 2 shows that the card 30 picks up application software 76 from an external

bus 43 to be applied to the PLL 64 as explained in paragraph [0027].).

Therefore it would have been obvious to "one of ordinary skill" in the art at the

time the invention was made that the computer program used by the control chip taught

by Sha et al. would be received from an external bus as taught by Yavitz such that a

separate memory for the computer program would not be needed inside the control chip

in order to allow for the conservation of space for the control chip such that the control

chip can be made smaller.

Regarding claim 4, Sha et al. and Yavitz disclose the control chip of claim 3.

Sha et al. also disclose wherein the frequency of the electromagnetic

interference signal and the spread out width at that frequency is set by the algorithm

within the software phase lock loop (Please refer to the explanation used in the rejection

of claim 7.).

Regarding claim 5, Sha et al. disclose an application specific integrated circuit

for reducing electromagnetic interference, comprising:

a first input terminal for receiving a clock signal (Figure 5, the phase detector 110

contains an input terminal which receives REF 102 as explained in column 4, lines 2-3.

Column 3, lines 35-46 explain that the output signal Fout is a spread spectrum clock

signal with a mean frequency determined by the frequency for the signal REF, and if the

signal REF has a frequency then it is a clock signal.); and

a software phase lock loop coupled to the first input terminal (Figure 5 shows the

SPLL 100 which receives signal REF as explained above.) for spreading out the

frequency of an electromagnetic interference signal according to the clock signal and an

algorithm (Please refer to the explanation used in the rejection of claim 1.), wherein the

electromagnetic interference signal at each frequency are modulated according to a corresponding spread out width (Column 4, lines 13-26 explain that the ROM codes are optimized for the frequency Fout such that the spread spectrum circuitry can properly spread out the width using the frequency Fout as the center frequency.).

Sha et al. fails to teach of a second input terminal for receiving the algorithm.

Yavitz discloses of a control chip which picks up an algorithm from an external bus of which is input into an input terminal of a PLL (Figure 2 shows that the card 30 picks up application software 76 from an external bus 43 to be applied to the PLL 64 as explained in paragraph [0027].).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made that the computer program used by the integrated circuit taught by Sha et al. would be received from an external bus as taught by Yavitz such that the integrated circuit would receive the algorithm at a second input terminal in order to allow for the conservation of space for the control chip such that the control chip can be made smaller while still allowing for the proper functionality of the circuit.

Regarding claim 6, this claim is rejected under the same rationale as claim 4.

Conclusion

8.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Stephen G. Sherman whose telephone number is (571)

272-2941. The examiner can normally be reached on M-F, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

SS

2 August 2006

AMR A. AWAD
PRIMARY EXAMINER